

## Bourbon County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/8/2018

Using the most recent IMPLAN data available (2016) adjusted for 2018, 18 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Bourbon County economy.<sup>1</sup>

These 18 sectors have a total direct output of approximately **\$108.9 million** and support **981 jobs** in Bourbon County. Running the model for all 18 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Bourbon County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
Direct Effect	981.3	10.31%	\$23,839,404	4.07%	\$108,933,097	18.61%
Indirect Effect	169.4	1.78%	\$9,337,554	1.60%	\$20,143,598	3.44%
Induced Effect	53.1	0.56%	\$3,439,309	0.59%	\$6,250,404	1.07%
<b>Total Effect</b>	<b>1203.8</b>	<b>12.65%</b>	<b>\$36,616,267</b>	<b>6.26%</b>	<b>\$135,327,099</b>	<b>23.12%</b>

As shown in the above table, agriculture, food, and food processing sectors support **1,204 jobs**, or **12.65%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$135.3 million**, roughly **23.12% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 18 agriculture, food, and food processing sectors is approximately **\$36.6 million**, or **6.26% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **6.26% of the total economy**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **644 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Bourbon County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	644.0	\$54,208,163
All other crop farming	149.7	\$8,377,618
Landscape and horticultural services	46.0	\$1,328,702
Wholesale trade	38.3	\$7,282,355
Support activities for agriculture and forestry	33.6	\$887,566
Food product machinery manufacturing	32.5	\$9,685,367
Truck transportation	26.3	\$3,255,915
Dairy cattle and milk production	19.8	\$8,282,167
Grain farming	19.0	\$5,104,951
Veterinary services	18.7	\$1,733,152

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$54.2 million** to the Bourbon County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	644.0	\$54,208,163
Oilseed farming	13.8	\$10,557,972
Food product machinery manufacturing	32.5	\$9,685,367
All other crop farming	149.7	\$8,377,618
Dairy cattle and milk production	19.8	\$8,282,167
Wholesale trade	38.3	\$7,282,355
Animal, except poultry, slaughtering	9.1	\$6,479,801
Grain farming	19.0	\$5,104,951
Truck transportation	26.3	\$3,255,915
Veterinary services	18.7	\$1,733,152

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Bourbon County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	13.8	\$10,557,972.13
Grain farming	19.0	\$5,104,950.99
Vegetable and melon farming	0.3	\$60,246.89
Fruit farming	1.1	\$104,428.29
Tree nut farming	0.4	\$57,286.79
Greenhouse, nursery, and floriculture production	0.8	\$123,836.89
All other crop farming	149.7	\$8,377,617.98
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	644.0	\$54,208,162.91
Dairy cattle and milk production	19.8	\$8,282,166.86
Poultry and egg production	1.1	\$852,268.91
Animal production, except cattle and poultry and eggs	8.5	\$812,551.24
Commercial hunting and trapping	7.6	\$102,975.82
Animal, except poultry, slaughtering	9.1	\$6,479,801.29
Bread and bakery product, except frozen, manufacturing	8.5	\$979,431.68
Frozen cakes and other pastries manufacturing	0.5	\$82,177.68
Food product machinery manufacturing	32.5	\$9,685,366.70
Veterinary services	18.7	\$1,733,151.76
Landscape and horticultural services	46.0	\$1,328,702.13

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Bourbon County, the retail sector was omitted.